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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,630	07/15/2003	Do-Wan Kim	1293.1907	5655

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STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

TUPPER, ROBERT S

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/618,630	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Robert S. Tupper	<b>Art Unit</b> 2652	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213. •

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 10-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

Art Unit: 2652

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 10-31 are rejected under 35 U.S.C. 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The specification and drawings disclose that the head limiter is mounted on the flange of the spindle motor. There is NO disclosure of an alternative location for the limiter. There certainly is NO disclosure of locating the limiter on some rotating part of the spindle motor system.

Both claims 10 and 30 recite: (1) "the disk mounted on a mounting surface" (line 3), and (2) "a head limiter protruding toward the disk from the mounting surface" (line 5).

There is no definition in the specification for the "mounting surface". However, the disclosure does indicate that the disk is mounted on the rotating hub (element 136 – see figures 5 and 7, and paragraph 0032 lines 2-4).

These claims are inadequately disclosed under 35 USC 112 par.1 if read to encompass locating the limiter (1) on a rotating part of the spindle motor system, or (2) on any surface other than the flange of the spindle motor.

Art Unit: 2652

Alternatively, these claims are indefinite, misleading, and misdescriptive for failing to clearly state the location of the limiter. Note concerning newly added claim 31, that there is no indication the "flange" is flange of the spindle motor.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10-17, 20, 23, 29, and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by KHANNA et al (5,640,290).

The "mounting surface" recited in these claims is being read as the base plate of the disk drive for this rejection.

Note figure 8. KHANNA et al shows a disk drive with a head limiter system that includes projections (62) located in the parking zone (see claim 2 column 9 lines 13-14) that limit the vertical movement of the head (36) and suspension (34) due to shock loading. The limiters are located both directly opposite the slider and between the secured end of the actuator and the slider (re claims 12 and 13). The projections are integral with the base (re claim 23). See figure 2 - the actuator has a pivot (32), arm (30), and suspension (34) (re claim 20). The base is clearly "stepped" – i.e. has two different levels (re claim 29).

Art Unit: 2652

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over KHANNA et al (5,640,290).

KHANNA et al shows a disk drive with a parking system including a head limiter substantially as claimed.

KHANNA et al differs in not: (A) specifying the exact range of motion allowed (re claim 21), and (B) showing the shape of the limiter (re claim 22).

Concerning (A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the projections to provide the listed range of motion. The motivation is as follows: KHANNA et al states that the clearance should be set "as small as possible" (see column 8 lines 3-5). Given that no specific dimensions were disclosed one of ordinary skill in the art would have routinely experimented to set this. This would have been the obvious result of routine experimentation and optimization.

Concerning (B), it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the limiter to have an upper curved surface. The motivation is as follows: KHANNA et al, again, simply does not specify the shape. Given that no specific shape was disclosed one of ordinary skill in the art would

have routinely experimented to set this. This would have been the obvious result of routine experimentation and optimization.

6. Claims 18, 19, and 24-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, par.1 and par.2 , set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Applicant's arguments filed 4/22/05 have been fully considered but they are not persuasive.

Concerning the 112 par.1 and par.2 rejection, Applicant argues that "the claimed mounting surface clearly refers to a surface mounting the disk".

The Examiner does not agree that this overcomes the rejection.

The recitation in both independent claims 10 and 30 on line 3 "the disk mounted on a mounting surface" is only reasonably read as the surface to which the disk is attached. The specification and drawings clearly show that the disk is attached to the rotating hub (element 136 – see figures 5 and 7). There is NO disclosure of locating the limiter on any rotating part of the spindle motor.

To argue that the recitation "the disk mounted on a mounting surface" reads on some stationary surface not directly attached to the disk is not reasonable in view of the disclosure. The claim recitation clearly infers a direct connection between the disk and the surface to which it is mounted.

Applicant states that the mounting surface "can be any surface for mounting the disk", but does not cite any specific support for this in the disclosure. Applicant does not cite any specific elements this would encompass. It is unclear what surfaces Applicant is referring to.

Applicant further argues that the Office Action has failed to set forth a prima facie enablement rejection.

This is clearly in error.

The rejection has indicated that the only disclosure is of locating the limiter on the flange of the spindle motor; that there is no definition of the term "mounting surface"; that the recitation "the disk mounted on a mounting surface" infers the rotating hub in view of the specification and drawings; that there is no disclosure of locating the limiter on a rotating part of the spindle motor; that the recitation "the disk mounted on a mounting surface" is not reasonably read as some stationary surface not directly connected to the disk. These do establish a prima facie case for lack of enablement.

Applicant argues, concerning the par.2 portion of the rejection, that "the mounting surface" is not indefinite when read in light of the specification and other claims". Again, Applicant has not supplied specific examples from the specification and claims to support this allegation.

The Examiner does not agree. As already set forth, the specification and drawings disclose ONLY that the limiter is located on the flange of the spindle motor. Further, the specification and drawings indicate that the disk is mounted to the rotating hub. Thus the recitation the limiter protrudes from the mounting surface is indefinite.

Art Unit: 2652

Given the broadest reasonable meaning under normal rules of claim construction, the recitations involving the limiter and the mounting surface remain unclear to one of ordinary skill in the art. It is not reasonable to read the "mounting surface" as some stationary surface not directly connected to the disk.

Concerning the 102 rejection, Applicant argues that KHANNA et al "only sets forth a limiter directly opposite from a head, and fails to disclose a limiter disposed between a head and the secured end of the actuator and the head".

This is in error. Figure 8 of KHANNA et al clearly shows plural limiter elements (62), the inner one being located between the secured end of the actuator and the head.

Concerning the 103 rejection, Applicant has only argued that it would not be reasonable to consider the base plate of the disk drive to mount the disk. This is rather surprising since Applicant argues essentially the opposite concerning the 112 rejections.

The 103 rejection is presented in the spirit of complete and compact prosecution – i.e. present all possible rejections even if based upon non-consistent reasoning. If Applicant's position on the meaning of "mounting plate" is accepted (i.e. the term means any stationary surface not directly connected to the disk), then it reads on the base plate in KHANNA et al.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within



TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert S Tupper whose telephone number is 703-308-1601. The examiner can normally be reached on Mon - Fri, 6:00 AM - 3:30 PM (first Fri off).

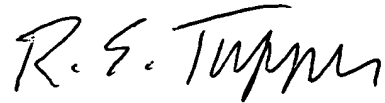
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/618,630

Page 9

Art Unit: 2652

A handwritten signature in black ink, reading "R. S. Tupper". The signature is written in a cursive, flowing style with a large, prominent "R" and "T".

Robert S Tupper  
Primary Examiner  
Art Unit 2652

rst